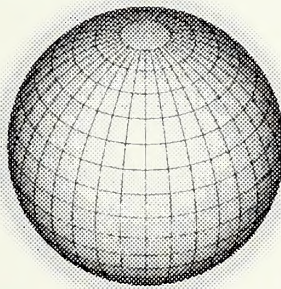




# A Strategy for Meeting Our Research and Scientific Information Needs



U.S. Department of the Interior  
Bureau of Land Management  
June 1996

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# A Strategy for Meeting Our Research and Scientific Information Needs

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# Foreword

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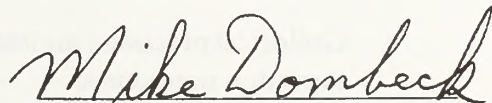
The year 1996 marks the 50th anniversary of the Bureau of Land Management and the 20th anniversary of the Federal Land Policy and Management Act. This 1976 law gave the BLM its basic land-management mission, which is to ensure the health and productivity of the public lands so that future generations of Americans can use and enjoy them. To better carry out its mission, the BLM in 1994 developed a *Blueprint for the Future* that sets forth an interdisciplinary or Big Picture approach to land management.

In practical terms, a Big Picture or landscape approach means focusing on watersheds to promote biological diversity and sustainable development of commodity-related resources, such as forage, timber, and minerals. This approach also gives the BLM the ability to respond to changing ecological conditions on the landscape, which is crucial for an agency that manages 270 million surface acres of public land, most of it located in the 12 Western States, including Alaska.

But to be effective, this Big Picture land-management approach must be based on accurate scientific information. That's why I am pleased to introduce the BLM's strategy for obtaining such information.

By making the most of science and technology and by working with scientific and technical experts, we will be able to do a better job of managing the land for its environmental and economic benefits.

Ultimately, of course, our success will be measured by the land's health and productivity and by the people who use and enjoy the public lands. But we are confident we can meet the challenges facing us, and a key reason for our confidence is that we are committed to using science and technology to the maximum extent possible. I believe the strategy set forth in this document will enable us to meet that commitment.



Mike Dombeck, Acting Director

# Thinking and Acting Strategically

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Successful organizations are guided by strategic thought and action. They develop strategies to identify and resolve issues crucial to the well-being of the organization. It is our responsibility to provide a long-term perspective of public lands management in the face of short-term pressures, and to create a vision for what the Bureau of Land Management wants to be and where it wants to go.

We must enhance our use of existing scientific research and acquire new knowledge if we are to realize our vision of productive, healthy ecosystems on the public lands and sustain vital natural resources over the long term. Research is an essential tool for advancing science, but the BLM neither has, nor anticipates having, a significant research capability within its organization. Therefore, a close working relationship with sister agencies and other partners that can provide this capability is essential if we are to turn our vision into reality.

This document lays out a strategy for identifying BLM's priority research needs, addressing all areas of science throughout the agency. It also tells how to acquire research results through partnerships with federal science agencies, the academic and nongovernment sectors, and other appropriate sources. Finally, it provides a set of guidelines for transferring research results into use.

This strategy encompasses all kinds of research and scientific information required by the BLM to accomplish its mission. These include information needs related to:

- Ecosystem processes, including ecosystem health, ecosystem sustainability, and land use and characterization.
- Biological diversity and genetic variability, including the biology of keystone and threatened and endangered species.
- Climatic and hydrological systems and influences.
- Geological processes, mineral occurrences, and mineral extraction procedures.
- Social, economic, and institutional factors.
- Cultural and historical influences.

# Scientific Research Goals

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As stated in the BLM's "Blueprint for the Future" vision statement, the Bureau is committed to using the best scientific and technical information to make resource management decisions. More specifically, BLM's goals for the use of scientific research products are:

- Define critical baseline information on the status of the land's health.
  - Define indicators of land health.
  - Understand the structure, function, dynamics, and interrelationships of ecological systems.
  
- Identify and evaluate long-term trends concerning the land's health.
  - Understand historic trends.
  - Understand how change occurs and what factors influence change.
  - Determine how to measure change in ecological health.
  
- Predict direct, indirect, and cumulative effects of natural processes and management activities on the land's health.
  - Provide predictive tools (models, assessments).
  - Help estimate outcomes of alternative courses of action (including no action).

# Scientific Research Strategies

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In accomplishing its goals, the BLM will emphasize collaborative partnership efforts with other agencies, academic institutions, and non-governmental organizations. Coordinated inter-disciplinary and multiagency research efforts are essential to ensuring the integrity and sustainability of our Nation's ecological systems and necessary if land managers are to respond effectively to complex ecosystem management issues. Emphasis will focus on setting priorities for applied research. In considering research needs and priorities, existing literature and knowledge will be evaluated and the BLM will stress close consultation and review by peer groups and scientists. Transfer and use of new knowledge to field users is the ultimate objective of this process.

## *Criteria for Setting National Research Priorities*

The following criteria will be used in determining national research needs:

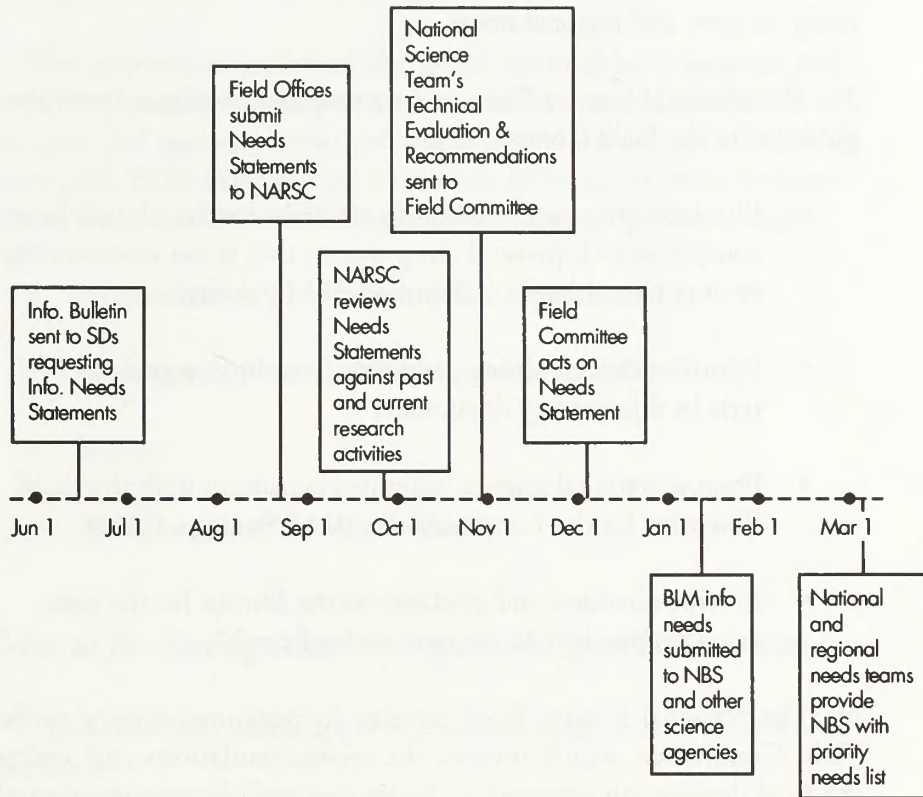
- Legally mandated research needs (e.g., T&E species, NEPA)
- Large spatial extent of an issue (e.g., weed invasions)
- Secretary or Director priority (e.g., healthy rangelands)
- Collective priority of several states or agencies (e.g., neotropical migratory bird habitat)
- Bureauwide need for an improved management tool (e.g., a predictive model)

## *Process for Acquiring Research and Scientific Information at the National Level*

1. Headquarters initiates the process of identifying national-level research and information needs by sending an information request to all BLM State Offices. The request is normally issued in June of each year to coordinate with the Federal Government budget cycle. (Refer to Figure 1, BLM Research Needs Timeline.)



**Figure 1. BLM Research Needs Timeline.**



2. An Information Needs Statement (INS) is submitted through the State Director or Assistant Director to the National Applied Resource Sciences Center (NARSC). NARSC receives all INSs and sees that they are given preliminary peer review. NARSC determines if the need can be met through an analysis or synthesis of existing information. If not, the need is forwarded to the National Science Team for consideration.

The National Science Team is a permanent chartered Bureau Team with a limited scope of responsibility and a few recurring annual duties. Members of the Team include one scientist representing each BLM State Office and the National Applied Resource Sciences Center (NARSC), and two representatives from the Washington Office, one representing the Assistant Director for Resource Assessment and Planning and one representing the Assistant Director for Resource Use and Protection. The Chairperson of the Field Committee's Research Subcommittee is an ex officio member. The Director's Science Advisor serves as the Team moderator, not as a member, to focus the Team's attention on National priorities.

The National Science Team is guided by the mission of the BLM and its focus is the relationship of science to that mission. The Team

takes a broad perspective on national BLM science needs. Members of the Team focus on national and global issues rather than more narrowly on state and regional needs.

3. The National Science Team reviews proposed needs and provides guidance to the Field Committee to:

- Eliminate proposals requesting research that has already been completed or is presently in progress, that is not researchable, or does not address an identified BLM priority.
- Prioritize the remaining proposals according to goals and criteria in this strategy document.
- Propose national science initiatives consistent with the BLM Blueprint for the Future and the BLM Strategic Plan.
- Provide direction and guidance to the Bureau for the next year's proposals (i.e., the next cycle of needs).

4. The National Science Team presents its recommendations to the Field Committee, which reviews the recommendations and makes the final decision on approval or disapproval and the prioritization of proposals. A higher priority will be given to research needs that have multiagency importance.

5. The Washington Office Assistant Director for Resource Assessment and Planning identifies opportunities for accomplishing approved research needs from a variety of sources. Examples of possible sources include the National Biological Service (NBS), the U.S. Geological Survey (USGS), the Environmental Protection Agency (EPA), the Department of Defense, the Forest Service (FS), the National Science Foundation (NSF), the Aldo Leopold Wilderness Research Institute, colleges and universities, etc. *Note: DOI policy states that DOI bureaus have the right of first refusal in meeting research needs.*

6. Headquarters has a continuing responsibility to coordinate and work with science agencies and other organizations in identifying the processes and criteria needed to make the BLM effective in meeting its research and other science needs.

7. Under certain circumstances, the BLM will consider funding high priority research needs that cannot be obtained through outside

partnerships or sources, working through existing budget prioritizing procedures.

8. The ultimate objective of the BLM national-level research and science information needs process is transferring new information to scientists and managers who can make use of it to more effectively accomplish BLM management objectives. Information must be communicated so that it is readily understood, using a variety of means:

- Publications (e.g., tech note series, reports, etc.)
- Automated index of available research results
- Videos
- Workshops and training sessions

### *Criteria for Setting Local or Regionally Specific Priorities*

The following criteria apply to research needs at the regional and state level:

- Legally mandated research needs
- Narrow area of application
- High importance to local land managers
- Collective priority of several local agencies
- Unfunded national priorities having local significance

### *Process for Acquiring Research and Scientific Information at the Regional and Local Level*

State and local needs may be aggregated regionally to facilitate effective communications with other agencies such as the NBS, USGS, EPA, and FS. Regions may be defined as ecological regions or as the administrative regions of other agencies as appropriate.

1. Although local information needs may be surfaced and addressed with partners at any time, BLM State Directors and BLM partners

will collectively initiate a more formal process of identifying local and regional level research and information needs in June of each year to coordinate with the Federal Government budget cycle. (Refer to Figure 1, BLM Research Needs Timeline).

2. The BLM may designate regional science coordinators (RSCs) selected by the BLM State Directors in the region of interest to coordinate the formal information needs process for the BLM in the region. The RSCs will also represent the BLM at annual National Biological Service Information Needs meetings to select and prioritize needs among the DOI bureaus and will similarly interact with other agencies and partners to facilitate the BLM's effort to have its information needs met.

3. Information Needs Statements (INSs) will be submitted through the State Director(s) to the RSC. The RSC will obtain appropriate peer review comments for each INS and may request assistance from NARSC to determine if the need can be met through an analysis or synthesis of existing Information. If the need cannot be met in this way, the RSC will coordinate further review and evaluation by BLM's State Office Research Coordinators for the states in that Region.

4. The RSC, in consultation with State Research Coordinators from each of the states in the Region, will review and evaluate all INSs. INSs will either be approved or rejected. Approved INSs will be prioritized according to the goals and criteria in this strategy document.

5. The RSC will work with NARSC, the Washington Office, DOI science bureaus, and other partners to identify opportunities for accomplishing approved research and science needs. *Note: DOI policy states that DOI bureaus have the right of first refusal in accomplishing research and science needs.*

6. The BLM State Directors and State Office Research Coordinators have a continuing responsibility to coordinate and work with partner agencies and other organizations to identify the processes and criteria important for making the BLM effective in meeting its research and other science needs.

7. Under certain circumstances, BLM State Directors may consider funding high priority local and regional needs that cannot be obtained through other partnerships or sources, working through existing budget prioritizing procedures.

8. The ultimate objective of the BLM local and regional research and science information needs process is transferring new information to regional scientists and managers who can make use of it to more effectively accomplish BLM management objectives. Information must be communicated so that it is readily understood, using a variety of means:

- Publications (e.g., tech note series, reports, etc.)
- Automated index of available research results
- Videos
- Workshops and training sessions

# Appendices

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## A. Format for Submitting Research Needs

See page 11.

## B. Processes for Identifying Known Sources of Research Funding

These will be produced as a separate technical document.

## C. Peer Review Guidelines

BLM's peer review guidelines will be based on Departmental peer review guidance and will be published as a separate technical document.

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**Bureau Of Land Management Information Needs Statement**  
**Format Outline**\*

Date Received \_\_\_\_\_

SCIMIS Number \_\_\_\_\_

- I. Title of Information Need
  - II. Author
    - Date Prepared
    - Office Address
    - Phone
  - III. Information Category (Research, Inventory, Monitoring, etc.)
  - IV. Statement of Problem
    - A. Provide a concise statement of the management issue to be addressed.
    - B. Describe to whom the issue is important (i.e., program managers, users, special interest groups, Congress)
    - C. Describe the severity of the problem.
    - D. Describe the geographic area of interest where results may be applicable.
    - E. Describe how the needed information will provide a solution to the management issue.
    - F. Provide supporting narrative to tie information need to one or more of the four goals described in this document.
  - V. Describe the information need in technical terms.
  - VI. Describe the kind of information you hope to obtain and how the information will be used to address the management issue.
  - VII. Provide the name, phone, and fax number of a BLM contact familiar with the need and the management problem related to the need.
- Appendix A. Review comments and additional supporting information.
- Appendix B. Action Page for Field Committee

\* Note: Needs statements should not exceed 3 pages, excluding appendices.





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